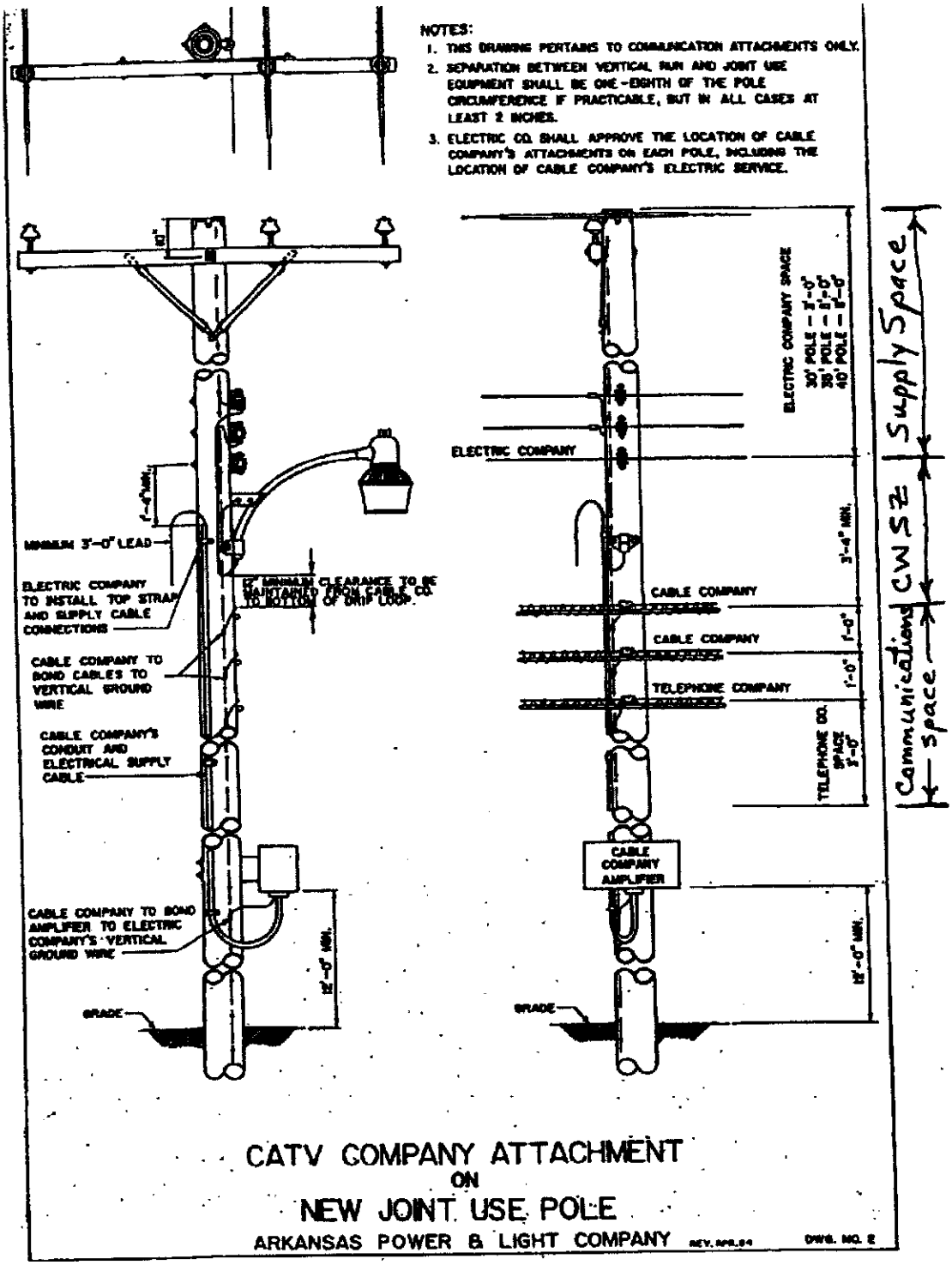
continues to install its facilities long after cable's attachments have been placed. To make matters worse it continues to this day to place its plant in violation, often creating gravely dangerous situations.

27. I have personally witnessed cable television lines installed over a 40-year period in every decade beginning in the 1960s. Aerial plant—electric and communications—is built today in much the same way that it was built in the 1960s.

28. The first things to be built are the poles and the electric lines that are located in the top portions of the pole. Historically, telephone companies installed their facilities in the "communications space" which begins below the "communications worker safety zone" ("CWSZ"). Cable television attachments usually were the third set of attachments to be placed on the pole, typically above telephone, and in most places – except where competitive fiber-based carriers are present – the last set of communications attachments before the CWSZ and (electric) supply place. The following diagram illustrates the different zones of a "typical" utility pole.



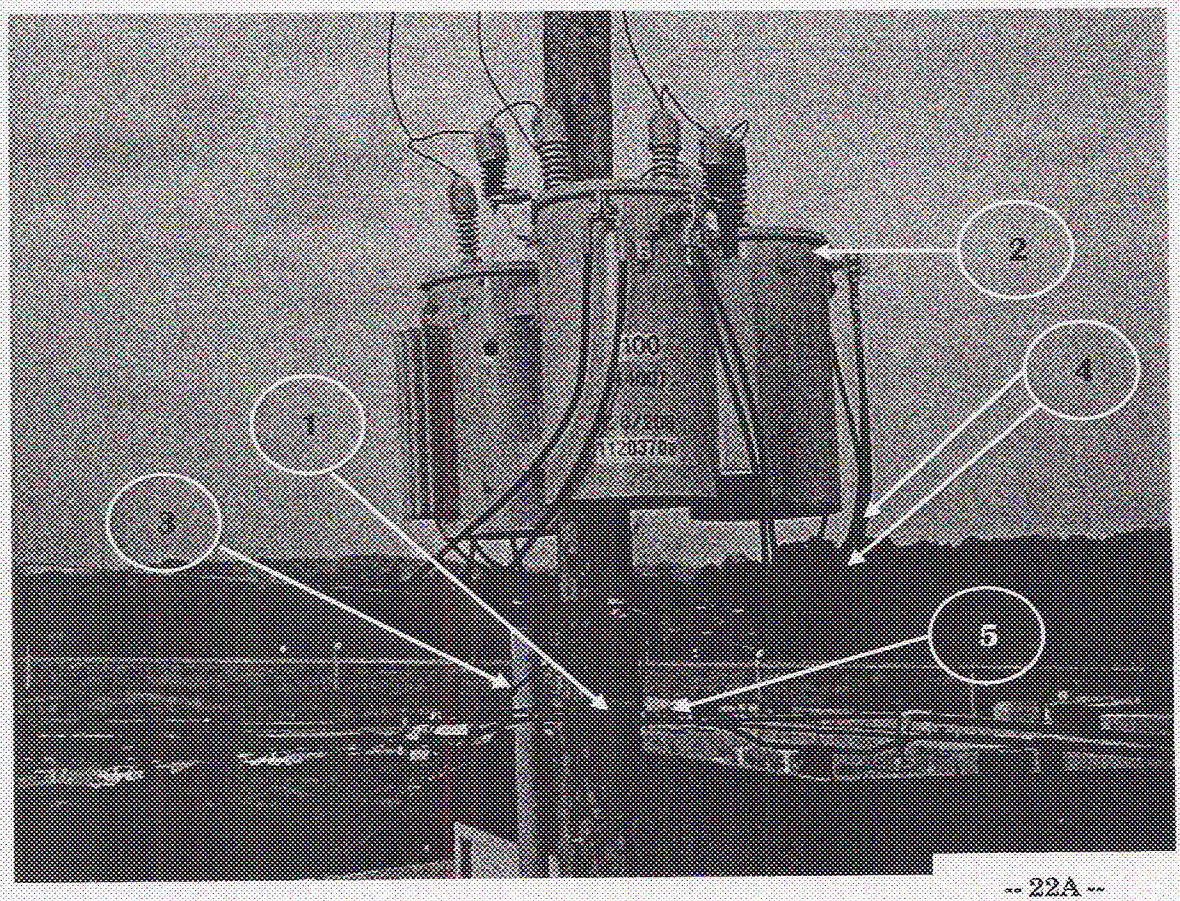
-- 20A --

This diagram which is attached to at least some EAI pole agreements shows a standard EAI pole space allocation. This allocation includes five feet of communications space, a 40-inch communications worker safety zone ("CWSZ") and eight feet of electric supply space for a 40-foot pole. (The hand-written notes in the right margin are mine.)

The 40" space in the diagram at the right is what is referred to as the communications worker safety zone. ("CWSZ")

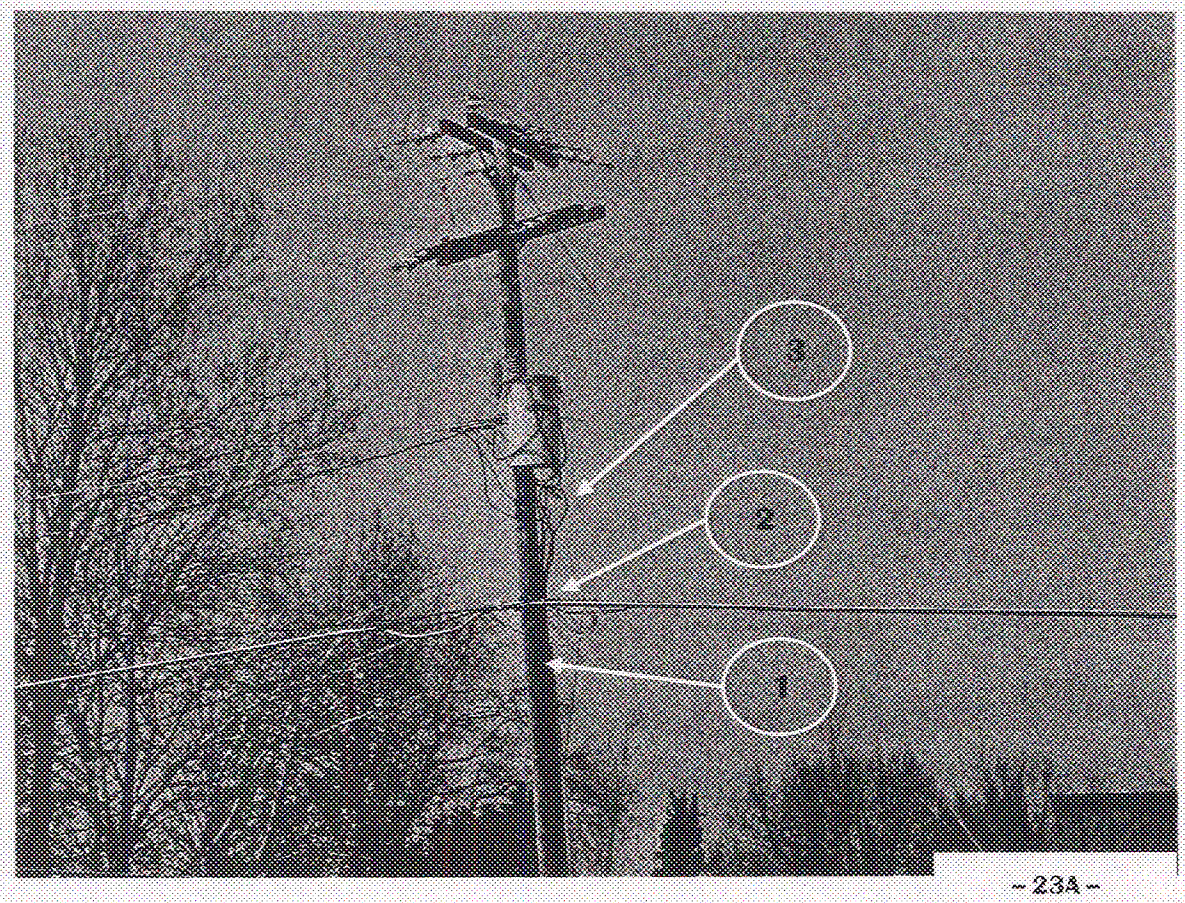
29. EAI's argument is that this sequence of attachments (electric, telephone and then cable) essentially proves that cable as the "last man on" *must* have created the violations. This argument overlooks one critical fact, the omission of which creates an absolutely false picture of plant conditions.

30. That fact is that power companies usually install transformers and secondary voltage wires only at the time that they are needed to supply power to a dwelling or other structure. The poles will be there, and high voltage electric lines will be there, but the transformers and secondary voltage lines to homes and businesses are only installed if electric service is needed. If electric service is not needed at a location, there is no transformer. Many of the violations that EAI assigns to Cable Operations were not created by cable at all. They were created by the electric company when it installed transformers and electric service drops (aerial or underground) in some cases ***decades*** after it set the poles and the cable operator had placed its facilities. This is not an isolated occurrence. Some good examples appear in the photographs that follow.



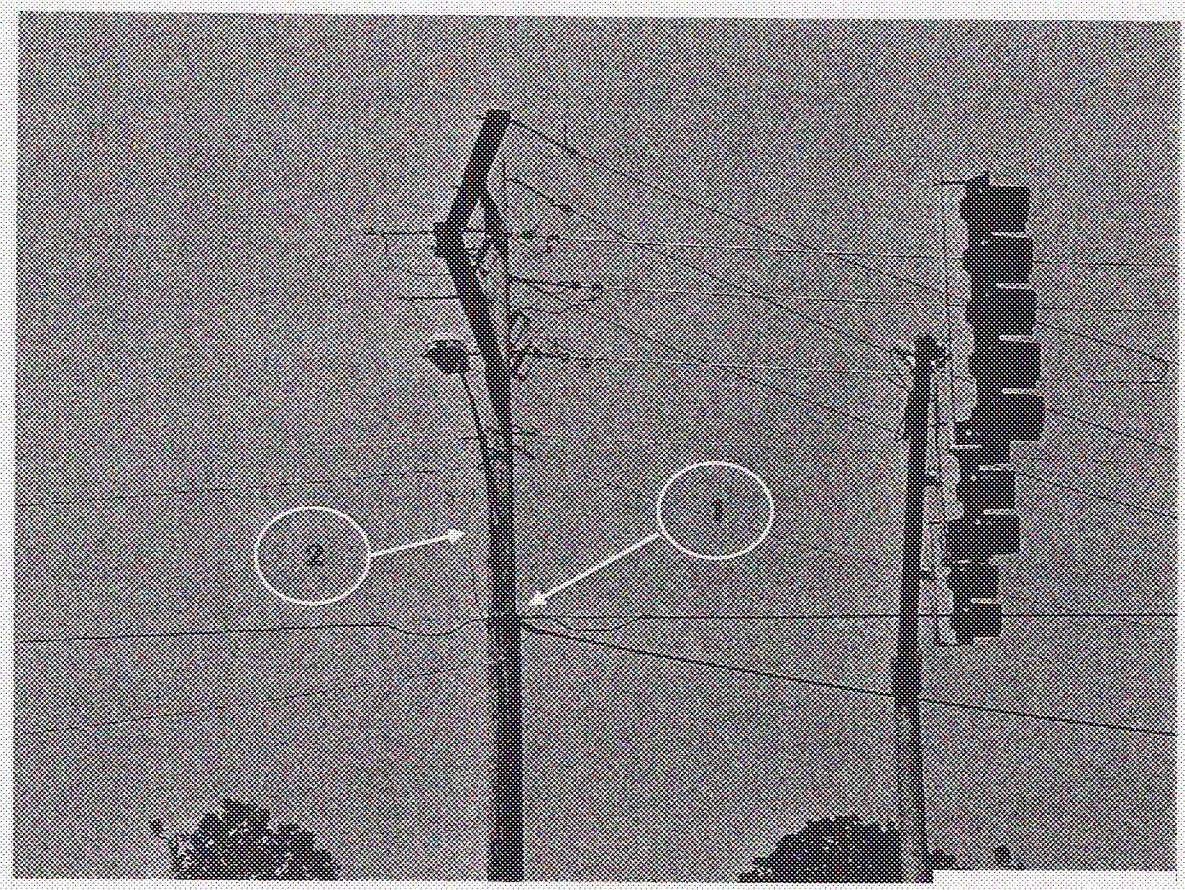
-- 22A --

One of Entergy's central contentions is that electric facilities always are on the poles first and that cable facilities always come later. This is so it can argue that whenever there are clearance violations, they have been created by cable. This photo shows that this is not true. The three-phase transformer bank depicted in this photo were installed within the last several months to provide electric service to a new McDonalds restaurant. The poles and the cable television attachments (Arrow #1) were installed before the offending riser conduits and transformers. Cox was attached in compliance. The new transformer cans (Arrow #2) the grey "riser" conduit (Arrow #3) and the electric wires (Arrow #4), were installed after cable. There are no more than a few inches of separation between the hot electric wires coming out of the riser (Arrow #3) and Cox's facilities (Arrow #1). The NESC mandates that there should be 40 inches between the riser cable and the Cox attachment. I believe that this pole was set by EAI to provide adequate vertical clearance above the new driveway at the McDonalds. These photos were taken at the direction of Jeff Gould of Cox.



– 23A –

This photo, which I took, presents another good example. It shows an EAI secondary underground service riser pipe (Arrow #1) stopping more than 12 inches ***below*** the cable television facilities (Arrow #2) located on this pole. The NESC requires this electric conduit to be 40 inches above cable. You can see that there are two underground service drops running from the transformer and the loops coming out of the transformer are very sloppy (Arrow #3). Putting the proper length of conduit and placing the loops correctly could have been done easily. Underground service risers such as these are usually added long after the cable television facilities have been installed. Other examples of poorly installed electric facilities that went in long after cable appear in the next photo. Location: Jacksonville, AR Alley between N. Bailey Blvd & N. James St.



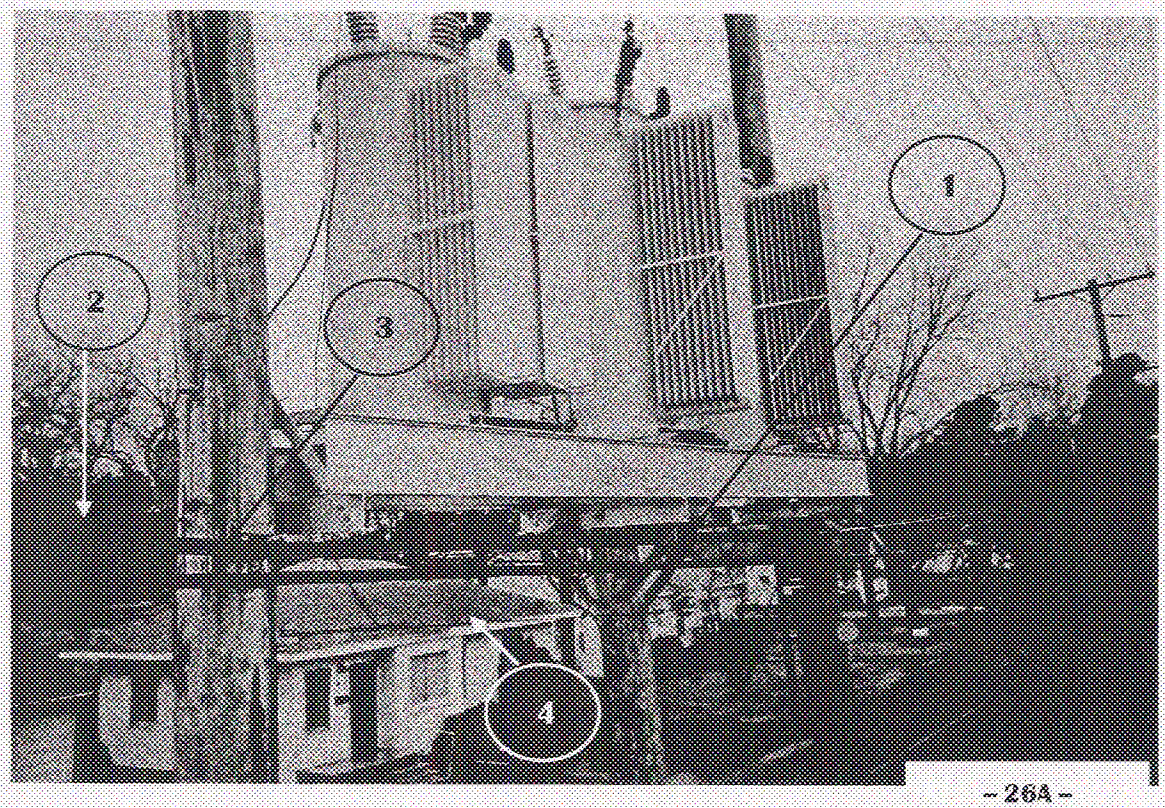
– 24A –

This photo, which I took, shows an EAI service to a new traffic signal. Electric power to supply the traffic signal is wired by the governmental agency or contractor. Metal conduit with two wires for 120 volt power is extended up this pole (Arrow #1). In this case, EAI should not have made this connection because of this NESC violation, and required the conduit owner to extend the conduit to 40 inches above cable television. You can see several exposed wires hanging beside the pole next to EAI's secondary on the left of the pole (Arrow #2). This is a blatant violation of the NESC's 40 inch rule. Connections to a new service (in this case traffic) must be 40 inches above cable. EAI should remedy this by placing a "u-guard" (which is essentially one-half a plastic conduit over the traffic signal leads, or require the owner of the traffic signal to extend the weather head up to 40 inches or more above cable. Location: Jacksonville, AR W Main St at N. Bailey Blvd.

31. In growing areas, traffic signals, street lights and new homes and businesses require new electric installations. In sparsely populated areas, however, transformers are placed relatively infrequently. Many of EAI's poles were installed 20 to 40 years (or even longer) ago along roads

with little initial development. Thousands of examples of these clean poles can still be seen, especially in outlying areas. They contain almost no pole space violations because neither power, telephone, nor CATV have added any drops or other facilities to those poles.

32. But again, as areas develop and homes and business replace open fields and unpopulated areas, the need for electricity increases and more transformers, services drops and other electric facilities are installed. In many of the Arkansas cases I have observed, the power company installs their facilities improperly and creates violations by installing them too close to cable and telephone. Frequently, EAI replaces a pole or adds another pole between two existing poles and does not leave space for cable television or telephone to transfer or attach in compliance. Again, the installation of these electric facilities are a major source of NESC violations, which sometimes create very serious safety issues. The next photograph provides a vivid example of this.



– 26A –

This photo, taken at the direction Jeff Gould of Cox Communications, shows a multi-pole platform-mounted voltage regulator that Entergy has installed *after* the installation of communications facilities. Note on the center pole the steel bracket (Arrow #1) that has completely boxed in the two sets of communications lines on the poles. The top line is the cable attachment (Arrow #2). EAI set new poles, pulled Cox's cable down and physically forced it beneath a bolt through one pole (Arrow #3). EAI built its neutral wire below the telephone cable (Arrow #4). Neither cable tv nor telephone is attached to either pole or bonded to the pole grounds. This creates a very dangerous situation In installing these facilities Entergy has violated NESC rules, cable tv, telephone and EAI standards. This photo shows that EAI has a lack of understanding of the NESC, lack of training, no inspection of new construction and a complete disregard for users of the communications space. Electric companies, like communications companies from time to time must add new facilities to their networks. But they must do so in a way that respects the rights of others to occupy the poles, including providing adequate notice of the work that they wish to perform on the poles.

False Premise No. 4: Every Entergy Pole Attachment Standard Is Reasonable And Must Be Complied With.

33. As was outlined in the Complaint and the declarations of ACTA representatives, EAI and its contractor USS are imposing a number of

engineering and construction standards on Arkansas cable operators that simply are not reasonable.

34. Complainants have acknowledged that certain low cables, certain missing guy wires and certain close separations between power and cable TV create reliability risks and/or hazards to utility workers or the public. These are the kinds of items that should be corrected and—contrary to Entergy's assertions—cable operators are working today to do this.

35. To assist in this effort, Comcast has requested from EAI a list that prioritizes the violations that should be addressed first. EAI has refused to provide this list. After first stating in a negotiation (the May 26, 2004 meeting that I discuss in detail below) that it would provide such a list, EAI later told Comcast that Comcast already had a list of all violations found and that it was Comcast's obligation to sort through the list manually to determine priorities. This is just one of innumerable examples that exemplify Entergy's "it's your problem not ours" approach.

36. Moreover, EAI refuses to accept NESC compliance with certain rules as a solution to existing or future compliance, even in limited circumstances, while adopting NESC basic provisions in many others. Its refusal to accept reasonable interpretations and applications of the NESC has been a very significant impediment to resolving this matter informally. I can provide a very significant example of this.

EAI Will Not Agree To Reasonable Standards

37. After well over a year of impasse between Entergy on the one hand, and Alliance and Comcast on the other, in approximately February 2004, Comcast requested a meeting with senior people at EAI in an effort to resolve this dispute.

38. As I understand it, Comcast made a personal appeal to EAI's President and CEO Hugh MacDonald. This meeting, which I attended, eventually was held on May 26, 2004 and to me seemed promising because it established a real dialogue among all the parties: EAI, the cable people and USS. In fact, one of the outcomes of that meeting was that a "committee" was established to finalize engineering and construction terms that the parties would use to make the necessary plant corrections going forward. The main outcome of that meeting is that the parties had a good start on setting a foundation on reasonable engineering standards. They also established a tentative plan of action.

39. After much delay by EAI, the first committee meeting was held 35 days later on June 30, 2004. The "minutes" of the May 26, 2004 meeting were presented to the committee by EAI. The following paragraph in bold print had been inserted as the first item in the "minutes."

> **Any exceptions to contractual requirements agreed to at this meeting, or future committee meetings will only apply to pre-existing conditions that meet all NESC requirements. All new installations and attachments must meet all conditions and requirements of the contract.**

40. I participated in both the May 26, 2004 and the June 30, 2004 meetings. Nothing was mentioned in the May 26 meeting about the restrictions contained in this insert. Since the first sentence is confusing, we asked Entergy several questions at the June 30 meeting. EAI defined "pre-existing conditions" as only poles that had been reported by USS to have a violation. EAI further explained that all existing poles (or conditions) not identified by USS as violation poles, all poles presently included but modified in any way in the future and all new pole attachments would be subject to the different EAI standards.

41. We objected to the addition of these added restrictions as unreasonable and impossible to keep up with as field conditions change. It was absurd. EAI stated that the clause was non-negotiable. Getting nowhere on this point, the meeting finally moved on to attempt to resolve and clarify the few remaining issues that had not been clearly agreed to at the May 26 meeting.

42. Significant progress was made on the NESC rules and interpretations which EAI and USS would accept for clearing "past" violations. These included accepting 12-inch separations in spans between communications and neutral and 30-inch separation at poles. Other NESC rules regarding guying, marking guys, power supply rules and street lights were discussed and tentative agreements reached.

43. Another absolutely essential point on which Entergy refused to budge was that it would not agree to begin to provide advance notice to Comcast, as required by the contract, before building down on existing poles into violation. This Reply Declaration is filled with examples of where just a little bit of communication between EAI and its communications attachers would prevent inefficient use of pole space, subsequent costly corrections and, most important, unsafe plant conditions.

44. EAI also insisted that USS must only approve plant conditions meeting the almost agreed-upon NESC rules that differed from EAI contract on a pole-by-pole basis. This, of course, would required much more time and expense to cable operators. In sum, the spirit of cooperation that marked the first May 26 meeting was entirely absent from the June 30 meeting. Nonetheless, the next committee meeting was scheduled and held on July 7, 2004.

45. Little progress was made at that or subsequent committee meetings. EAI added language that sought to require Comcast to secure a professional engineer certification on a pole-by-pole basis that the facilities comply with NESC rules because they comply with NESC editions in effect when built. In addition, EAI refused to consider its absurd requirement limiting negotiated engineering guidelines to past-identified violations. Despite the fact that no final agreement was reached, Comcast notified EAI that it was proceeding to correct violations without a complete agreement but

based in part on negotiated guidelines and NESC compliance. It has continued with its corrections. I reviewed the Declaration of EAI's David Inman. While he tried to make it seem that EAI had been accommodating, my strong view is that Entergy scuttled what could have been a reasonable and workable arrangement.

EAI Has Distorted The NESC And Its Application

46. EAI has grossly distorted the terms and even the purpose of the NESC. The Inman Declaration provides a strong example. At paragraph 35 of his Declaration, Mr. Inman states: "EAI has attempted to accommodate the Cable Operators in the past by permitting them to remedy past violations by bringing those facilities into conformance with the applicable NESC code." As with much of what EAI has submitted here, it is not just what was said and who said it, but what is not said. The truth, as indicated, is that Entergy was *not* going to allow the NESC to apply to all past violations, only the poles on which USS had discovered alleged violations. As to future installations, and as to all poles on which USS had not identified violations, this statement from Mr. Inman is silent. This means that the NESC was not going to apply, but EAI's unpredictable and unreasonable standards were.

47. For example, these standards are unpredictable because EAI reserves the right to change them at will. Every new NESC edition has code changes but also allows existing facilities in compliance with prior editions of

the code to be grandfathered. EAI refuses to respect this critical provision. I address this corruption of grandfathering in greater detail elsewhere.

48. This is not to say that there should not be situations where the utility's standards exceed the NESC basic provisions. This can be a perfectly reasonable approach to take.

49. For example, during the design and installation phases of pole and electric facilities there are a few basic things that must be done. First, EAI must provide adequate space on the pole for its facilities (and possible expansion) and for other attachers. Second, it must actually install its wires and equipment consistent with the plant design and the space allocations. Third, communication companies, including cable operators must comply with EAI standards and attach consistent with EAI's reasonable space allocation and requirements. A point that simply cannot be over-emphasized is that the NESC is the foundation that underlies such additional utility specific standards. The heated argument that Entergy makes in its legal papers that the NESC is the absolute minimum standard to be followed fundamentally misconstrues the NESC. A critical element to understanding this most basic point is to examine closely the Declaration of EAI's expert, Mr. Dagenhart. I know Mr. Dagenhart to be very knowledgeable about the NESC, and he and his firm have a very good reputation in the utility community. Note well that Mr. Dagenhart has not provided any support for EAI's extreme view that the NESC is an absolute minimum standard. In fact,

the NESC Handbook (which many -- including myself -- find very helpful in working on these issues) which is edited by Mr. Dagenhart's business associate Alan Clapp states:

> In essence, the rules of the NESC give the basic requirements of construction that are necessary for safety. If the responsible party wishes to exceed the requirements for any reason, he may do so for his own purpose *but need not do so for safety purposes.*" (my emphasis) The Handbook also states: The 1990 Edition of the NESC was specifically editorially revised to delete the use of the word 'minimum' because of the intentional or inadvertent misuse of the term by some to imply that the NESC values were some kind of minimum number that should be exceeded in practice; such is not the case.

50. While I believe that this passage speaks for itself, I want again to emphasize that Mr. Dagenhart does not render an opinion to support this central EAI contention. Again, it is not simply what is said and by whom, but what is ***not*** said—and by whom. I believe that this is particularly significant because, in addition to all Mr. Dagenhart's other credentials, he serves on the NESC Standards Subcommittee for Purpose, Scope, Application, Definitions and References. *See* NESC 2002 Ed. p. viii.

The Rules Exceptions Contained In The NESC Are Critical Components To The Rules Themselves

51. Another example of Entergy's misunderstanding of the NESC is contained in the Declaration of Lonnie Buie. Mr. Buie states: "What the complainants truly argue, in general and obscure terms, is that communications attachments may meet certain complex conditions to fall within exceptions to the basic NESC provisions." Buie Declaration Para. 28.

He argues in essence that the exceptions are not basic provisions of the NESC. He is wrong.

52. Rule 015.D. of the 2002 NESC (Intent) states: "Exceptions to a rule have the same force and effect required or allowed by the rule to which the exception applies." But Mr. Buie states: "NESC by its own terms is a minimum standard." But then Mr. Buie quotes Rule 010 of the NESC which contains the "***basic*** provisions...for safety..." Prior versions of the Code used the word "minimum" instead of "basic," as it now appears. The NESC Handbook, Fifth Edition, which I quoted above, but which bears repeating here) explains why. "The 1990 edition of the NESC was specifically editorially revised to delete the use of the word "minimum" because of the intentional or inadvertent misuse of the term by some to imply that the NESC values were some kind of minimum number that should be exceeded in practice; such is not the case." So Mr. Buie is wrong about the force and effect of exceptions in the NESC and indulges in precisely the kind of "misuse" of the Code that the 1990 Edition "specifically editorially revised" out of the text.

53. But Mr. Buie does not stop there. Yet another misapplication of the NESC is found at Paragraph 45 of Mr. Buie's Declaration where he states that grandfathering was first adopted in the 1977 NESC and that facilities installed before 1977 would not be eligible for grandfathering. Rule 202.B.2 of the 1977 NESC states: "Existing installations, including maintenance

replacements, which comply with prior editions of this code need not be modified to comply with these rules..." This rule was effective in 1977 and applied to prior editions back to the 6th Edition, published in 1960. The 6th edition of the Code essentially required existing installations to be modified to comply with the standards in the 1960 edition. Additionally, the Rule 013B.1 of the current NESC states: "Where an existing installation meets, or is altered to meet, these rules, such installation is considered to be in compliance with this edition and is not required to comply with any previous edition." Together, this means that if a facility is in compliance with the rules that existed at the time the attachment was made or if that facility is in compliance with the current edition of the Code, it is not a violation.

54. The NESC Handbook confirms this:

> Rule 013.B.1 now reflects that the latest edition contains the best knowledge of appropriate requirements. If an installation meets the present requirements, it is acceptable regardless of what provisions may have been in effect at the time of its construction. Thus when work on an existing structure is completed, it may meet the current edition requirements or those of a previous applicable edition.

55. Mr. Buie relies on these fundamental misconceptions in Paragraphs 70,71 and 72 of his Declaration to effect further distortions to the Code. He states that Rule 235c2b(1)(a) exception 1 is not a basic provision of the code. As shown above, the NESC says exceptions have the same force and effect as the rule to which it applies. Here is a list of a few, but not all, of the distortions and errors that Mr. Buie applies to this case. For example:

- In paragraph 74 he pointed out that the 4-inch separation between cables in spans was first in the NESC in 2002. This illustrates a misapplication of Rule 013.B.1.
- In paragraph 75 is a misinterpretation of NESC rule 015.D.
- In paragraph 78 of his declaration finds fault with my example pole 321 of circuit V210. However, if we compare the USS inspection work sheet for this pole in Harrelson exhibit 12 to the photograph in Buie exhibit G, the photograph does not match USS's work sheet or Mr. Buie's description. USS identified one violation, namely 34 inches between neutral and cable.
- In paragraph 80, Mr. Buie stated that poles 604 and 608 of circuit V620 had secondary cables going up the poles rather than primary (high voltage) cables. He goes on to say photographs of the poles are in attachment H. The photos in his attachment H shown no risers at all but rather a street light close to cable.

Many Plant Configurations That EAI Terms "Violations" Are Not

56. Another major factor in this dispute has been EAI's insistence to call things "violations" that are not violations at all. On some of these, Arkansas operators are willing to accommodate EAI and bring their facilities into compliance with some of Entergy's preferred standards. These standards are for such things as bonding to every pole, placing separate anchors for all necessary guys, placing guy markers on all guys, and other

items. While cable operators agree that accommodations on some of these points is reasonable, it is essential to understand that Entergy's MO in Arkansas is to call items like these, as well as other items like joint anchors and the 30-inch to neutral at-pole separation requirement violations when they are not. Stated another way, Entergy is classifying any cable facility that does not correspond with its own (and in most cases incorrect) assessment as violations by cable operators, while overlooking its own violations and those of other parties. Among other things, this creates the mis-impression that cable is responsible for tens of thousands violations and that nobody else—particularly EAI itself—has created violations. It is a simple formula. If cable has created the violations, it must pay to correct them. But I do not believe that this accurately reflects either Arkansas field conditions, or the truth behind EAI's inspection program—that cable operators need to be singled out because of their poor safety records. If EAI's dominant concern is plant safety other than, say, seeking others to pay for its inspection programs and plant correction, then it would do well to look at its own plant. In fact, EAI's own plant has what I would estimate tens of thousands of critical violations that are far too numerous to catalogue here. The photo appearing below is but one example.

– 38A –

This photograph, which was taken at the direction of Comcast's Marc Billingsley, shows a hot EAI electric service lying on the ground of some woods near a residential area in Little Rock. This hazard was initially reported to EAI by USS during its "safety audit." Comcast discovered it during a follow up engineering trip to the pole, identified by USS. Entergy still had not reattached it to the pole as of June 7, 2005. A hot wire on the ground is a serious hazard to the public. This illustrates a major clear disconnect between EAI's claimed emphasis on safety and its trouble response department.

Not Bonding To Every Ground Is Not A Violation

57. On the issue of bonding to electric grounds, Mr. Dagenhart is exactly correct in stating (in paragraph 9 of his declaration) the four-ground connections per mile NESC requirement. With approximately 24 poles per mile of line, this would require about one-sixth of the poles to be bonded. He correctly explains in paragraph 11 of his declaration that electric and communications systems are "required to meet the basic requirements of the

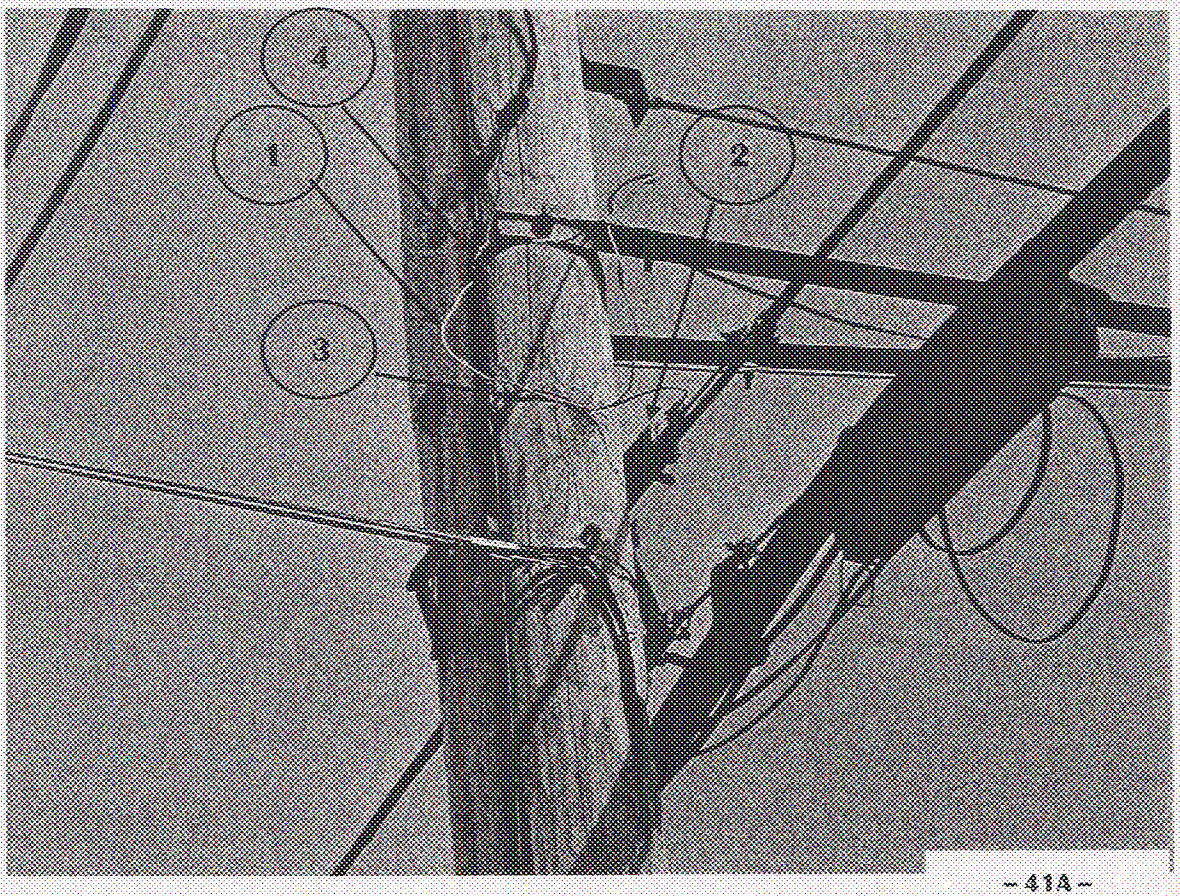
NESC." ACTA members do not now object to bonding messenger wires to EAI pole ground wires on every pole going forward. But in my opinion it is unreasonable to call missing bond connections ***violations*** and dangerous. It is also unreasonable to characterize this condition and many other non-violations as justification for an unjust, disruptive and expensive audit, permit freeze, and hostility toward cable. I would also note that where the electric company's neutral wire is not adequate or properly maintained that this code requirement can cause the cable strand to become the power company's neutral and present serious hazards.

Separations From Electric Facilities

58. The cable operators participating in this case have not contended that EAI should be allowed to design only to the basic provisions of the NESC. They have simply asked EAI that a few NESC provisions specific to communications including the specific rules governing separations between power and communications facilities at the pole, as well as in the spans between the poles, be accepted on poles where EAI does not have adequate space for EAI's greater requirements. While EAI uses some, they do not use all of these NESC basic provisions.

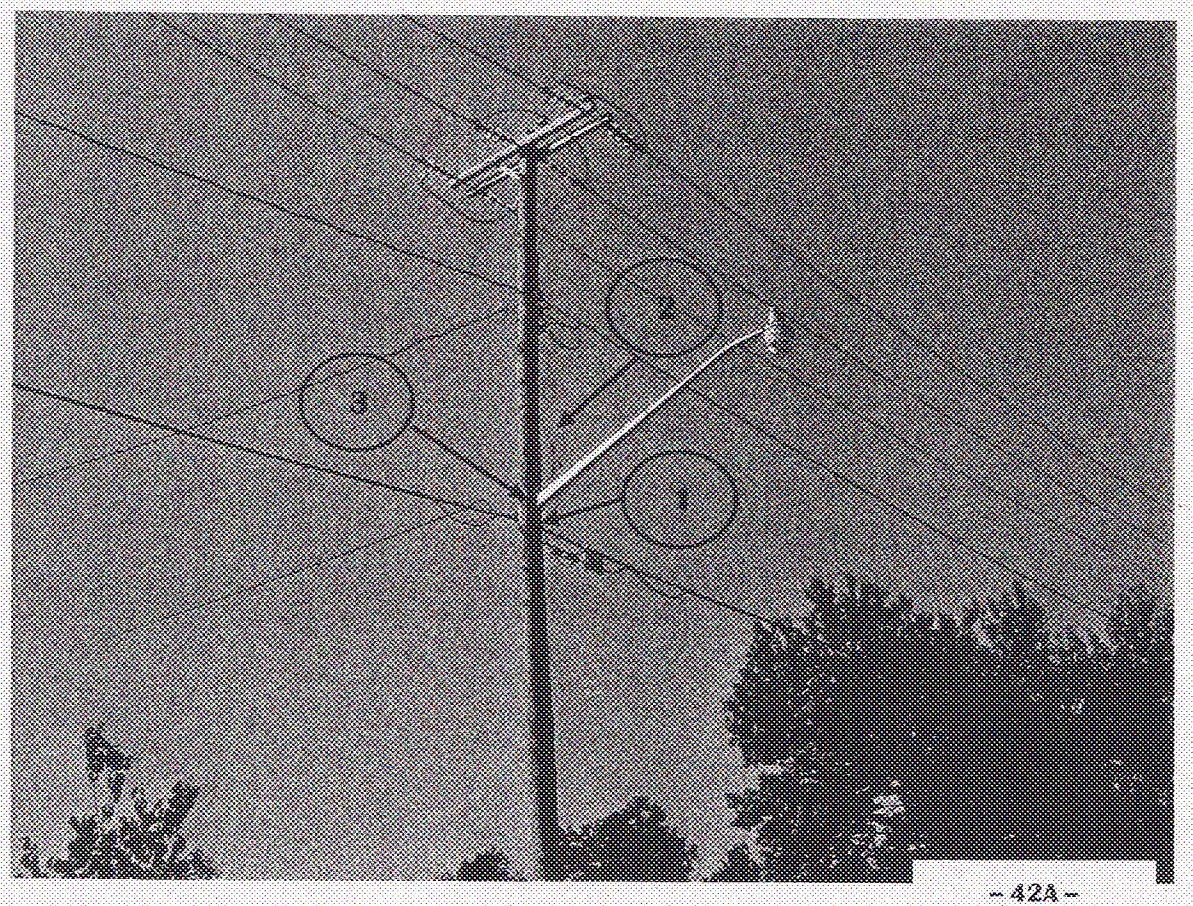
59. For example, EAI accepts 12-inch separation from 120-volt electric leads going into street lights. EAI, will not accept 30 inches separation from the electric neutral wire at 0 volts. It requires 40 inches, the same as for wires up to 8,700 volts.

60. In addition, EAI did agree to use some of these NESC rules for "past" violations and on a case-by-case basis, but only with a PE certification. Ironically, some NESC basic provisions for employee safety have been overlooked by EAI and USS, as well as some of EAI's design specifications which exceed NESC. Examples of these include the NESC requirement of 20 inch separation between a non-grounded light bracket and communications, and the EAI design specifications that all light brackets be grounded. Another hazardous EAI practice which violates EAI standards and the NESC is connecting neutral conductors from lights and other equipment directly to pole ground wires and even using neutral conductors to first "ground" light brackets and then connect to pole grounds. The two photographs below are two very good examples of this problem.



– 41A –

This photo, which I took, shows a street light which EAI could readily have installed in compliance with the NESC but the white lead from the light (Arrow #1) runs down the pole until it almost touches the cable tv attachment (Arrow #2) and does touch the cable bond wire (Arrow #3). Then this white street light lead goes back up and connects to the EAI pole ground wire (Arrow #4). EAI has created three violations here. First, street light leads must be 12" above CATV. Second, the white neutral lead must connect to a neutral conductor (wire) not a pole ground wire. Third, the street light bracket must be grounded, or, the bracket must be 20 inches from cable. EAI's contractor, USS, which inspected this pole has seldom noted a street light grounding violation and never noted an incorrectly connected neutral. These numerous violations of the basic provisions of the NESC create real hazards to communications workers and electric workers alike and are the responsibility of the electric company to correct. Jacksonville, AR. N. First St.



– 42A –

This photo, which I took, shows a street light placed much too close to cable (Arrow #1). One hot wire lead (120 v.) hangs down alongside the pole (Arrow #2). The neutral wire for the light is connected to the pole ground at the same level as the cable television attachment. The bracket is not grounded (Arrow #3). There are four significant EAI violations at this location: (1) the street light leads are less than 12 inches to cable; (2) the bracket is grounded and is less than 20 inches to cable; (3) the neutral is connected to pole ground; (4) the long, hot wire is not secured to the pole. Location: Little Rock Mablevale Pike.

Not Having 12 Inches Of Separation Between Communications Facilities Is Not A Violation

61. The twelve-inch separation standard between telephone cables and telephone and cable facilities has been a Bell System standard and an industry-wide rule of thumb for decades. Generally, communications parties complied with it when it was sensible to do so, but it very frequently has not been followed in the field. Many electric power companies had this standard

it in their contracts but the agreements typically were silent on remedies for non-compliance. Finally, in 2002 this twelve-inch standard was incorporated into the NESC at Section 235H as a new NESC requirement. Of course, (and as I discuss elsewhere) the new 2002 requirement grandfathers all prior non-compliant installations.

62. It is very informative to read the actual new requirement:

> 235H.1. The spacing between messengers should *(my emphasis)* be not less than 30mm (12 in) except by agreement between the parties involved.
>
> 235H.2 The clearances between the conductors, cables, and equipment of one communication utility to those of another, anywhere in the span, shall be not less than 100mm (4 in), except by agreement between the parties involved.

63. This is an important point because Entergy and USS have treated less than 12 inches of separation between communications cables as violations and have cited them for thousands of these items. The 12-inch standard certainly was not an NESC violation prior to 2002. Moreover, the words that the 2002 Code adopts are normative ("should") and not mandatory ("shall" or "will"). The standard set forth in Section 235H.2, however, is mandatory ("shall") but was only adopted in 2002. In fact, no specific separation in the span (*i.e.,* in the lines between the poles, as opposed to at the poles) at all was required by the NESC until the 2002 edition. This means that if the facility was installed before 2002 and there was less than four inches of span clearance, then that facility is compliant. Equally important, paragraph 235H.2 allows communications companies to agree